REMARKS

In view of the foregoing amendments and the following remarks, reconsideration and allowance of this application is requested. Claims 1-21 are now pending, with claims 1, 9, and 16 being independent. Claims 1, 16, and 20 have been amended. Claim 16 has been amended to include subject matter corresponding to dependent claim 20.

Applicant thanks the Examiner for indicating the allowability of claims 9-15, 17, and 20.

Claim 1 has been amended in response to the Examiner's rejections under 35 U.S.C. § 102(b) and includes limitations indicated as allowable by the Examiner from claim 9.

As amended, claim 1 presents a method of conducting a circuit continuity test on an analog device. The analog device has a first and a second node that are connected to a test circuit with a number of inputs. The method includes providing a first voltage through a first resistor to the first node using a first input of the test circuit. The first node connects to a diode in the analog device that then connects to ground. Next, a second voltage is measured at the first node through a second input of the test circuit. The measured second voltage and corresponding operational state of the diode indicates the internal circuit continuity of the analog device.

Independent claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by Farmer. Applicant requests reconsideration and withdrawal of this rejection for at least the reason that Farmer does not describe or suggest that the first node couples to a diode in the analog device, the diode connecting the first node directly to ground. Farmer also fails to describe or suggest that the operational state of the diode is indicative of the internal circuit continuity of the analog device.

Farmer describes an electrical continuity test apparatus 10 as shown in Figure with a diode 14 across test terminal 12 and 20. The diode 14 is part of the test apparatus 10 and not the analog device under test (DUT). The DUT as described in column 1, lines 7-31 is two rectangular shaped electrodes that are welded together. Farmer's continuity tester determines continuity at the weld between the two electrodes. A terminal at one end of the rectangular electrode is connected to test terminal 12 and a terminal at the other end of the rectangular electrode is connected to test terminal 20. Diode 14 in continuity test apparatus 14 and not in the rectangular electrode DUT has a +5 volts DC voltage applied across it. If electrical continuity exists in the device under test between test terminals 12 and 20, the operational amplifier 36 outputs a voltage that turns on light emitting diode 78. If electrical continuity does not exist in

the device under test, the operational amplifier outputs another voltage causing light emitting diode 60 to light. Thus, the Farmer reference nowhere describes or suggests that the first node couples to a diode in the analog device, the diode connecting the first node directly to ground. Farmer does not describe or suggest that the operational state of the diode is indicative of the internal circuit continuity of the analog device. For at least these reasons, Applicant respectfully submits that claim 1 is patentable over Farmer.

Claims 2-8 depend from independent claim 1. Accordingly, Applicant requests reconsideration and withdrawal of the rejections for claims 2-8 for at least the reasons discussed above with respect to claim 1.

Amended claim 16 presents a combination including an analog device having a first and second input terminal with a first node and a second node and a pair of output terminals. A first resistor couples to the first node and receives a first input voltage. A second resistor also couples to the first node. A third resistor couples to the second node and receives a second input voltage. A fourth resistor also couples to the second node. The second resistor and the fourth resistor communicate to a testing device a voltage at the first node and the second node, respectively, that indicates the internal circuit continuity of the analog device.

Claims 16, 18, 19, and 21 stand rejected under 35 USC § 102(b) as anticipated by Shoemaker. Applicant requests reconsideration and withdrawal of these rejections because Shoemaker does not describe or suggest a first resistor receiving a first input voltage, a third resistor receiving a second input voltage, and a second resistor and a fourth resistor communicating to a testing device a voltage at a first node and a second node that indicates the internal circuit continuity of the analog device.

Shoemaker describes a testing apparatus for testing electrical devices such as operational amplifiers that sequences through a series of tests. The testing apparatus, shown in Figures 1A-1B, includes control logic unit 19 as described in col. 2, lines 51-72 that controls the sequencing of the tests performed on the operational amplifier. Test pushbuttons 20 may be depressed by a user and correspond to a particular test which the testing apparatus is programmed to conduct. When a pushbutton is pressed, the testing apparatus will sequence through a programmed list of tests as determined by the program board with a lamp 21 being lit corresponding to the test as it is performed. The tests open and close switches such as K4, K5, K7a, K7b, K12a, and K12b shown in Figures 1A-1B that are controlled by block 23 labeled "Relay Coils and Drivers."

As described in col. 4, lines 17-25 of Shoemaker, feedback line 26 is coupled to input 12 of device 10 through a resistor R1 and either switch K5, or series connected switch K7b and PBR 24 or series connected switch K12b and PBR 23. Feedback line 27 is coupled through a series connected resistor R2 to input 13 either through switch K4, or series connected switch K7a and PBR 21 or series connected switch K12a and PBR 22. Thus, feedback line 26 connects to input 12 of device 10 through only one of the three paths and feedback line 27 connects to input 13 through only one of three paths at any given time. Shoemaker does not describe or suggest a first resistor receiving a first input voltage, a third resistor receiving a second input voltage, and a second resistor and a fourth resistor communicating to a testing device a voltage at a first node and a second node that indicates the internal circuit continuity of the analog device. In Shoemaker, if first resistor (PBR 23) receives a first input voltage and a third resistor (PBR 22) receives a second input voltage, than the second resistor (PBR 24) and fourth resistor (PBR 21) cannot communicate to a testing device a voltage at the first node (12) and second node (13) respectively because switches K7b and K7a are in open states.

The Examiner in paragraph 9 of his Office Action mailed August 12, 2003 states that "PBR24 communicates a voltage with node (12) and PBR21 communicates a voltage with node (13) (It is noted that, across a resistor, there always has a potential different when current flows)." If PBR 24 and PBR 21 communicate voltages to their respective nodes as suggested by the Examiner, PBR 23 could not receive a first input voltage and PBR 22 could not receive a second input voltage because switches K12b and K12a would be open. No current would flow through resistors PBR 23 and PBR 22 because switches K12b and K12a are open and thus there would be no potential difference across these resistors. For at least these reasons, Applicant respectfully submits that claim 16 is patentable over Shoemaker.

Claims 18, 19, and 21 depend from independent claim 16. Accordingly, Applicant requests reconsideration and withdrawal of the rejections for claims 18, 19, and 21 for at least the reasons discussed above with respect to claim 16.

In view of these remarks and amendments, the Applicant submits that this application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account 20-0668 of Texas Instruments Incorporated.

Respectfully submitted,

Date: 12/30/2003

Indranil Chowdhury

Indranil Chowdhury
Attorney for Applicant
Reg. No. 47,490

Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX 75265
(972) 917-4371
(972) 917-4418 (Fax)